San Francisco Bay Conservation and Development Commission
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TO: Commissioners and Alternates

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SUBJECT: **Staff Report on Middle Harbor Enhancement Project**
(For Commission consideration on November 6, 2014)

Summary

In December 2000, the Commission authorized the U.S. Army Corps of Engineers (USACE) and the Port of Oakland (Port) to construct the Port of Oakland's 50-Foot Deepening Project, which included the deepening of the Entrance, Inner and Outer Harbor channels to minus 50 feet Mean Lower Low Water (MLLW). In addition, the project included the beneficial reuse of the dredged sediment at the Montezuma Restoration Project, the Hamilton Wetlands Restoration Project and at the Middle Harbor Enhancement Area (MHEA), a 180-acre subtidal habitat restoration located at the western end of the Harbor Channel and bounded by the Oakland International Container Terminal to the east, Middle Harbor Shoreline Park to the North, and Port View Park and the Ben E. Nutter Terminal to the West. When completed, the MHEA will restore shallow water habitat and provide habitat enhancement, including eelgrass.

In 2011, David Lewis, Director of Save the Bay, expressed his concern regarding the slow progress in completing the MHEA. At that time, the Port and the USACE provided the Commission with a summary of their progress in completing the MHEA. In May 2014, the Commission requested that the staff provide an update of the progress to date.

On October 16, 2014, the Commission will receive a briefing that provides an update on the project construction and anticipated completion schedule. As stated previously, the USACE and the Port staff have communicated their commitment to completing the project and providing the habitat benefits as originally designed into the MHEA project.

Staff Report

Background. On December 21, 2000, the Commission concurred with the USACE that the construction of the Port's Deepening Project, which included the MHEA, was consistent to the maximum extent practicable with the Commission's coastal management program, including the *San Francisco Bay Plan* (Bay Plan). At the same meeting, the Commission authorized the Port of Oakland to conduct maintenance and monitoring activities associated with the construction of the MHEA.

The USACE was authorized by Congress to deepen the Port of Oakland's Entrance, Inner and Outer Harbor channels to minus 50 feet MLLW and place the dredged material at the Montezuma Wetlands Project, the Hamilton Wetlands Restoration Project, the MHEA and the Berth 10 re-handling facility at the Port of Oakland. The MHEA is a project component of the Port of Oakland 50-Foot Deepening Project (Deepening Project), while the Hamilton and Montezuma Wetlands projects are separate projects with independent authorizations from the Commission.

The 180-acre Middle Harbor Enhancement Area was historically tidal wetlands, most of which were under water at high tide. The area was dredged in the early part of the 20th century to create 40-foot-deep berths for naval vessels. The MHEA project involved placing approximately five million cubic yards of dredged sediment in this area with the goal of restoring the deep-water berths to shallow-water subtidal habitat. The MHEA includes 42 acres of eelgrass beds, the development of deep water channels, shallow water channels, and flats to provide proper hydraulic connections, hard substrate, sandy beach, salt marsh, and high tide refugia island for birds.

MHEA Project Update. While delayed nearly two years due to federal funding shortfalls, the Deepening Project and placement of the dredged sediment has been completed. Construction of the final habitat elements of the MHEA are still underway.

Sediment Placement Site	**Volume Authorized**	**Actual Volume Placed**
MHEA	5.8 mcy	~ 5.2 mcy
Montezuma Wetland Restoration	2.9 mcy	~ 2.8 mcy
Hamilton Wetland Restoration	2.6 mcy	~ 5.9 mcy
San Francisco Deep Ocean Disposal Site	2.6 mcy	~ 1 mcy
Port of Oakland Berth 10	1.1 mcy	~ 0.16 mcy
Alameda Stockpile	0.9 mcy	0.0

mcy = million cubic yards numbers rounded to nearest ten thousand

Once placed, the sediment in the MHEA was allowed to consolidate for approximately one and a half years to allow for settling of the dredged material. In March 2011, the USACE completed a geotechnical report that concluded that approximately 600,000 cubic yards of sediment should be relocated to provide proper substrate (sandier sediment) for the targeted planting of eelgrass beds. In 2012, the USACE contracted with Caminzind Dredging to relocate 300,000 cubic yards of sediment in appropriate locations and elevations as part of their initial shaping of the site. Funding shortfalls prevented the remaining 300,000 cubic yards from being placed. Additional settling occurred in 2013 while the USACE completed a financial analysis to determine whether the project was within its budget allowance including inflation. Currently, the federal budget includes $6 million in fiscal year 2015 for this project and should provide enough funding to complete the grading activities and other constructed habitat features. Eelgrass would be planted in 2016-2017.

The Port will assume the responsibility for monitoring and managing the site as described in the *MHEA Construction Period and Long-term Monitoring, Maintenance, and Adaptive Management Program* (3M Plan). The staff has reviewed the Commission authorizations and has determined that while delays have occurred, neither the Port nor the USACE is out of compliance with their respective BCDC authorizations. The staff will continue to follow implementation of the MHEA, provide guidance to the USACE and Port, and apprise the Commission of the ongoing status of this project.

Policy Discussion. While the concept of beneficial reuse of dredged sediment to restore tidal habitat from subsided diked baylands had been proven successful at Sonoma Baylands, the MHEA is a unique project feature that provided some cost savings associated with disposal of dredged material and promised to provide ecological benefits in the form of restoring the shallow water habitat that once existed at the site. The project also offered an opportunity to create a large eelgrass bed, a relatively rare habitat in the Bay with high ecological value.

The placement of sediment at Middle Harbor constituted a large volume of dredged material that would not be disposed at one of the designed in-Bay disposal sites, and the Bay Plan policies did not explicitly provide for large in-Bay beneficial reuse projects. As a result of extensive discussions by BCDC, the USACE, the Port and the environmental community, including Save the Bay, and other interested parties, Bay Plan amendments were proposed to allow the placement of a large volume of dredged sediment at MHEA for habitat restoration and enhancement purposes, provided that a number of conditions were met. The resulting Bay Plan Policy on Dredging (Policy No. 11) requires, in part, that: (1) a substantial net improvement in Bay habitat is achieved; (2) adequate monitoring is performed; (3) the sediment used is suitable for aquatic placement; (4) the project would not result in a net loss of Bay surface area or volume; (5) offsetting fill removal would be at or near the site; and (6) the Commission should not authorize dredged material disposal projects in the Bay for habitat creation, except for projects using a minor amount of dredged material, until the Oakland Middle Harbor enhancement project is completed successfully.[1]

[1] For the full text of Dredging Policy 11 please see pages 47-48 in the *San Francisco Bay Plan*.

This dredging policy, along with other Bay Plan policies, provides guidance regarding future fill projects that use dredged sediment for habitat benefits. However, until the Middle Harbor Enhancement Area project is complete and determined to be successful, only those projects that use a minor amount of dredged sediment may be authorized. Currently, the Commission staff is aware of several conceptual proposals to use dredged sediment for wildlife habitat purposes as an adaptation response to rising sea level.